

ADDRESS OF MR. SANDFORD FLEMING.

MR. PRESIDENT—You have been good enough to invite me to address the Chamber of Commerce of Melbourne on the subject of an alternative submarine telegraph between Australia and England. It is therefore with no little satisfaction that I submit the following brief remarks for your consideration.

It is scarcely necessary to say that a direct line of telegraph across the Pacific, to connect these Colonies with England by way of Canada, has long been advocated as a work designed to be of great commercial value, and, moreover, as I believe, destined to be of the highest national importance to the Empire as a whole.

It is not unknown to members of this Chamber that at the Colonial Conference held in London six years ago the matter was discussed at considerable length, and that at various times since then the establishment of a Pacific cable has been warmly advocated on both sides of the ocean. The time is evidently now ripe for something more than mere advocacy. As far as I am able to judge, we have reached a stage when some practical step should be taken to unite Australia and Canada telegraphically, and I feel satisfied that this Chamber of Commerce, representing the intelligence and business activity of Melbourne, one of the greatest, if not the greatest, commercial centres in the southern hemisphere, can materially advance an undertaking so much to be desired.

The members of this body are no doubt perfectly familiar with all the circumstances connected with the laying of a cable to New Caledonia from the Australian Continent, assisted by the Governments of Queensland and New South Wales. I have no doubt that these Governments had excellent reasons for granting assistance at the time it was offered; and, in their anxiety to have telegraphic connection with North America, the possibility of this short cable forming a link in the main line had perhaps some weight; but, apart altogether from the Pacific cable, they considered that there were strong local reasons for having a telegraph to New Caledonia. If, however, it was ever thought that the New Caledonia cable might form a section of the Pacific cable, I believe I am warranted in saying that that idea has been entirely dispelled; and it has been dispelled mainly, I believe, by the

FLEMMING² SS.

agreement entered into by the Company with the Government of France. The agreement entered into by the Company with the Colonial Governments is dated early in 1892; that with France nearly a year later; and the latter agreement has the effect of placing the New Caledonia cable absolutely under the control of the French Government. I am unable to see that the Telegraph Company has acted in good faith with Queensland and New South Wales in throwing itself entirely into the arms of France. This, however, is a question for others to decide. I can only state, on the authority of the Premiers of these colonies, that they now regard the New Caledonia cable as a purely local affair, rendered necessary in great part by local circumstances which I need not enter into, and that they are ready on behalf of their Governments to co-operate with the Governments of the other colonies and with Canada in carrying out any well-devised scheme for establishing, quite independent of the New Caledonia cable, a telegraph across the Pacific, which, as far as practicable, shall be British throughout.

It has been urged in some quarters that it is impossible to lay a cable through the Pacific Ocean from any part of Australia or New Zealand to Canada without landing at some place such as New Caledonia, Samoa, and Hawaii, where British influence is not supreme. I have taken upon myself the duty of pointing out that it is quite possible to establish a cable without touching the possessions of any foreign power, and I beg leave to direct your attention to four routes which a British cable may follow; these I have indicated on the map before you.

ROUTE No. 1.

Commencing at Vancouver Island, the cable would extend to Fanning Island; thence to the nearest island of the Fiji group. From Fiji it may run direct to New Zealand, and thence to the Australian continent; or it may run first to Norfolk Island, and from that point bifurcate to the northern part of New Zealand, and to a convenient point near the boundary between New South Wales and Queensland. The distances by this route are as follow:—

	Knots.
Vancouver Island to Fanning Island	3232
Fanning Island to Fiji, North Island	1715
Fiji to Norfolk Island	1022
Norfolk Island to North Cape, New Zealand	415
Norfolk Island to Tweed mouth, near boundary New South Wales and Queensland	761
Total	7145

ROUTE No. 2.

From Vancouver Island the cable would be laid to a small unoccupied island indicated on the charts as Necker Island, favourably situated, about two hundred and forty miles westward from the Hawaiian group. From Necker Island the cable would extend to Fiji, and thence, as in Route No. 1, to New Zealand and Australia. The distances by this route are as follow:—

			Knots.
Vancouver Island to Necker Island	...	...	2431
Necker Island to Fiji	...	...	2546
Fiji to Norfolk Island	...	...	1022
Norfolk Island to North Cape, New Zealand	...	...	415
Norfolk Island to Tweed mouth	...	...	761
Total	...	...	7175

ROUTE No. 3.

As in Route No. 2, the cable would extend from Vancouver Island to Necker Island, thence to Onoatua, or some one of the eastern islands of the Gilbert Group. From this station in the Gilbert Group two branches would extend—one to Queensland, the other to New Zealand. The Queensland branch would touch at San Christoval Island, in the Solomon Group, and terminate at Bowen, connecting at that point with the land lines, easterly to Brisbane and Sydney, westerly to the Gulf of Carpentaria, where a connection may be formed with the Port Darwin-Adelaide trans-continental telegraph, leading to Victoria, Tasmania, South and West Australia. The New Zealand branch of this route would find a mid-station on Viti Levu, the southern island of the Fiji Group. The distances are as follow:—

			Knots.
Vancouver Island to Necker Island	...	...	2431
Necker Island to Onoatua, in the Gilbert Group	...	...	1917
Onoatua to S. W. Viti Levu, Fiji Group (New Zealand branch)	...	...	980
Viti Levu to North Cape, New Zealand (New Zealand branch)	...	...	1004
Onoatua to San Christoval, Solomon Group (Queensland branch)	...	...	953
San Christoval to Bowen, Queensland (Queensland branch)	...	...	979
Total	...	...	8264

ROUTE No. 4.

As in Routes Nos. 2 and 3, the cable would be laid from the northern terminal point to Necker Island. From Necker Island it would extend in a direct course to Bowen, touching at Apamana—a central island of the Gilbert Group—and at San Christoval, of the Solomon Group. At Bowen, this route may, as in the case of Route No. 3, connect with Melbourne, Adelaide, Tasmania, &c., by the South Australian overland line. Route No. 4 is probably the shortest possible line that can be drawn on the surface of the globe, between any part of Canada and any part of Continental Australia. It has the disadvantage of excluding from its telegraph service the Fiji Islands and New Zealand. To connect the latter colony a special cable from Queensland or New South Wales would be required. The Fiji Islands, however, would remain without telegraph service by this route. The distances are as follow :—

	Knots.
Vancouver to Necker	2431
Necker to Apamana, Gilbert Group ...	1865
Apamana to San Christoval, Solomon Group ...	969
San Christoval to Bowen, Queensland ...	979
Total	6244

ROUTE No. 4A.

To bring New Zealand within the sphere of telegraph service by this route, by a special cable from the mainland, the distance would be as follows :—

	Knots.
Vancouver to Bowen, Queensland (same as No. 4) ...	6244
Tweed Mouth to North Cape, New Zealand ...	1066
Total	7310

ABSTRACT OF DISTANCES.

	Knots.
Route No. 1.—Including both branches from Norfolk Island to New Zealand and Australia ...	7145
Route No. 2.—Including branches to New Zealand and Australia	7175
Route No. 3.—Including both branches to Queensland and New Zealand from the Gilbert Group	8264
Route No. 4.—Vancouver to Bowen	6244
Route No. 4A.—Vancouver to Bowen, with a special cable from the mainland to New Zealand ...	7310

COST OF THE NEW CABLE.

The first question which you will ask is, What will be the cost of a cable by these several routes, and how best can it be established? I have set forth my views on these points in a memorandum prepared for the information of the several Governments, and with permission I propose to refer to some portions of it.

In estimating the cost of a cable there are various circumstances which require to be considered. One of the most important is the allowance for slack. It is customary to add an allowance to the ascertained superficial distance of 20 per cent., in order that the cable may be safely laid at all depths and under all conditions likely to arise. This practise has been followed in estimating the cost of establishing a cable by each route. In each case the estimate is intended to cover the cost of cables of the best type manufactured. On route No. 1 there is an unusually long section—viz., that between Vancouver and Fanning Island—and opinions may differ as to the cost of spanning this distance. I can only say that a special allowance has been added in this particular instance.

A cable on route No. 1 is estimated to cost completed						£1,978,000
"	"	2	"	"	"	1,585,000
"	"	3	"	"	"	1,825,000
"	"	4	"	"	"	1,380,000
"	"	4A	"	"	"	1,610,000

There are two ways by which the undertaking may be accomplished. First, through the agency of a company liberally subsidised. Second, as a public work under Government control. I have given this question much consideration, and year by year I have become more and more firmly convinced that if economy, low rates for telegraphy, and the highest efficiency be desired, the latter means of establishing the cable is undoubtedly the best. Promoters of companies generally desire to make large sums of money. The policy of companies is to obtain from the public as large profits as possible, while that of Governments is to accommodate and benefit the public in every possible manner by reducing the rates to the lowest practicable point, and by giving the most efficient service. The principle of ownership of telegraphs by Governments is not new. It has long been adopted in the United Kingdom, in India, in these colonies, and elsewhere, and in every case I am aware of, where the principle has been tried, the public has derived the greatest advantage.

Various efforts have been made during the past ten years to have the Pacific Cable established by a subsidised company, but no company has offered to carry out the undertaking for a less subsidy than £75,000 a year, continued for a period of twenty-five years. It can be indisputably shown that under the plan of Government ownership, a much less annual payment, for a very much shorter period, will suffice. Moreover, when established, the cable will be public property, controlled by Government for the public benefit.

The proposal then is that Australia, New Zealand, Fiji, and Canada, should be joint owners of the Pacific Cable, and that it should be established and worked as a public undertaking for the common good. There is one difficulty to be met at the outset. Certain of the Australian Governments are under obligations to pay an annual subsidy of £32,400 to the Eastern Extension Company until May, 1899, and, in consequence, they may not consider themselves in a position to co-operate on equal terms with the other Governments concerned in establishing the new line. This difficulty is not, however, insuperable, and in my judgment it can most readily be overcome by providing out of capital an annuity to meet the subsidy as it annually becomes due. By this arrangement the liability of New South Wales, Victoria, South Australia, and Western Australia to the Eastern Extension Telegraph Company would be practically removed, and these colonies would be free to enter with Queensland, New Zealand, Fiji, and Canada into a joint agreement to accomplish the establishment of the Trans-Pacific telegraph. As will hereafter be seen, the annuity so provided to extinguish the subsidy of £32,400 a year would be met by profits accruing from the new cable. Meanwhile, all liability incurred in the raising of capital would be borne in equitable proportions, to be mutually agreed upon, by all the co-operating Governments.

To illustrate the proposal set forth, let us assume that the cable itself, say on route No. 2, requires an expenditure of—

					£1,600,000
To this capital add the sum needed to purchase					
an annuity to meet the annual subsidy of					
£32,400 from May, 1894, to May, 1899—					
five years	...	...	...	...	145,000
Total	...	...	...	...	£1,745,000

This total capital raised on the joint guarantee of the Australian Colonies, New Zealand, and Canada, could be placed at the low rate of 3 per cent., making a total charge of £52,350 per annum.

This interest charge is less than the lowest subsidy asked by any company, and I shall establish, by the strongest possible evidence, that unlike a subsidy for a fixed period of twenty-five years, long before the expiry of that period the whole interest will be met by surplus revenue.

COST OF WORKING.

I have obtained estimates, from the best authorities, of the cost of working the Pacific cable under Government. These estimates range from £45,000 to £60,000 per annum, and include the salaries of superintendents, electricians, and operators, two steamers for current repairs, and all necessary expense at terminal and mid-ocean stations. As it is desirable to make adequate allowances for every service, it is expedient to base our calculations on the highest estimate (£60,000) as the total cost of working the cable. £60,000 will accordingly be a first charge on the revenue, and it will remain a constant charge whatever the volume of business, whether five million words per annum or half a million only.

RENEWAL FUND.

Next to working expenses there should be an annual charge on revenue, for renewals. It is proposed, therefore, to place to a cumulative reserve, the sum of £32,000 a year, equal to 2 per cent. on the entire cost of the cable. This provision is considered ample until the earning qualities of the cable come to be thoroughly established.

REVENUE.

In many cases it is difficult, owing to the lack of information, to form estimates of the probable revenue of a projected undertaking. In this instance, however, the best data is available for our guidance. We have the published statistics of telegraph business by the existing line between Australia and Europe for a number of years, and it is fair to assume that on the establishment of the Pacific cable, rates and all other things being equal, the business will be equally divided between the two lines.

I am unable to ascertain the business for the past year, but I gather from the published returns that the number of words transmitted in the year ending May 1st, 1892, was 1,275,191.

If we divide this into equal parts, we have 637,595 words as a basis for estimating the revenue of the Pacific cable.

In examining the returns for previous years some striking peculiarities are apparent. During the eight years from 1882 to 1890 the telegraph business between the Australian Colonies and Great Britain increased on an average 54,441 words each year, equal to 14 per cent. per annum. This may be viewed as the normal increase under a high tariff, inasmuch as throughout these eight years the charges on ordinary messages were never less than 9s. 4d. per word. On May 1st, 1891, the rate was reduced from 9s. 4d. to 4s. per word, and within the twelve following months the business increased by 448,913 words—an increase of 54 per cent. on the business of the previous year, and 831 per cent. over the normal annual increase during the preceding eight years. The further expansion of business will no doubt for the present be disturbed and retarded by an increase in the charges on messages on the 1st January last; but there remains the experience of the year 1891-2 to establish the remarkable effect of a low tariff in stimulating telegraphy. In that single year the increase in the number of words transmitted under a 4s. rate was greater than the growth of the business during the whole of the preceding eight years under a 9s. 4d. rate.

One of the direct benefits to the public from the Government ownership of the Pacific cable will be the reduction in charges for transmitting messages. I have already mentioned that with a full and efficient staff, such as the estimate for working expenses provides for, it will cost no more to do a large business than a small one. There will, therefore, be no reason for preventing the freest expansion of telegraphy by the new line by lowering the charges. In my humble opinion, the rates across the Pacific should be lowered to 2s. per word immediately on the cable being laid, in order that the public may have the advantage of cheaper communication at the earliest moment.

The proposed rate of 2s. per word for transmitting messages across the Pacific would reduce charges between Australia and England to 3s. 3d. in place of 4s. 9d. as at present. Moreover, messages from Australia received at Vancouver would be forwarded to all parts of Canada and the United States for an average charge not exceeding 2s. 5d. per word in place of 6s.—the present charge.

I wish to avoid extravagant statements or too sanguine estimates. I would, in submitting my ideas, particularly desire to keep strictly within reasonable probabilities. If we base estimates on the existing volume of business merely, we must

anticipate that there will be no great advance over the business of 1891-2 for a few years, if the charges on messages are again raised as they already have been to some extent. In the calculations which follow, I shall, therefore, assume the business to be at a standstill for three years; that is to say, I shall assume that the business in 1894 will not be greater in volume than it was in 1891-2, and that thenceforth the normal increase of not more than 14 per cent. per annum shall apply. The number of words transmitted in 1891-2 was 1,275,191. It is assumed that the Pacific cable would, if in operation in 1894, obtain one-half of this business.

Year.	Number of words per annum.	Earnings of the cable at 2s. per word.	Year.	Number of words per annum.	Earnings of the cable at 2s. per word.
		£			£
1894	637,595	63,759	1900	1,173,176	117,318
1895	726,858	72,686	1901	1,262,439	126,244
1896	816,122	81,612	1902	1,351,703	135,170
1897	905,386	90,539	1903	1,440,967	144,097
1898	994,649	99,465	1904	1,530,230	153,023
1899	1,083,913	108,391			

It is scarcely likely that the Pacific cable will be established before the year 1896. The above estimate shows that in the year following (1897) the revenue from the cable would be £90,539, a sum equal to the whole working expenses, together with £30,539 for the renewal fund.

In the five following years, the revenue, in addition to paying working expenses and providing for gradually reducing the interest charges, would finally in 1903, within about seven years after the completion of the undertaking, be sufficient to meet every current charge, and the contributing Governments would practically be relieved from further liability. Not only would all fixed charges be then met, but in succeeding years the productive capacity of the undertaking would yield an annually increasing surplus, to be dealt with as the co-operating Governments may determine.

If instead of a 2s. rate we reckon the same business for each year at an additional 6d. per word, or 2s. 6d. in all, a charge on messages across the Pacific which would still be considered comparatively low, we have as follows:—

Year.	Earnings of the cable at 2s. 6d. per word.	The fixed Charges, including working expenses, renewal fund, and interest, being in all £144,350 per annum.	
		Deficiency.	Surplus.
	£	£	£
1897	113,173	31,177	—
1898	124,331	20,019	—
1899	135,489	8,861	—
1900	146,647	—	2,297
1901	157,805	—	13,455
1902	168,963	—	24,613
1903	180,121	—	35,771
1904	191,279	—	46,929
1905	202,437	—	58,087
1906	213,595	—	69,245

This last estimate gives the result for the first ten years' operation of the cable based on a 2s. 6d. rate and a low normal increase. It shows that the revenue for the first year would be insufficient to pay the whole interest on capital in addition to working expenses and provision for renewal fund, and that the co-operating Governments would together require to pay £31,177 to make up interest. In the following year the deficiency to be made good would be £20,019; in the third year, £8,861. A small surplus would result in the fourth year, and at the end of ten years there would be an accumulated surplus of over £250,000 after meeting interest on cost and every other charge.

COMPARISON WITH PRESENT SUBSIDY.

If we compare these estimated results with the sums now paid in the form of subsidy and guarantee for the temporary use of the existing telegraph, we shall find everything in favour of an independent cable owned and controlled by Government.

There is first a fixed annual subsidy of £32,400 paid to the Eastern Extension Cable Company by five of the colonies. In addition to this annual payment I find in the Postmaster-General's (N.S.W.) report for 1892 (page 25) that further sum have been paid to the same Company for the past two years to obtain a reduction in charges from 9s. 4d. to 4s. and 4s. 9d. Under the heading "Cable Guarantee," I find that £27,520 was paid for the year 1891-2, and £21,778 for the year 1892-3. If we add this

guaranteed payment to the subsidy, we find the payments in each case to have been £59,920 and £53,363, paid as follow :—

Colony.	Subsidy and Guarantee *	
	For year 1891-2	For year 1892-3
	£	£
By Victoria	25,730	23,048
„ New South Wales	23,787	21,126
„ South Australia	7,966	7,213
„ Tasmania	1,447	1,102
„ Western Australia	990	874
Total sums paid	£ 59,920	53,363*

* NOTE.—This does not include £815 paid by New Zealand.

These figures, obtained from the official returns, make it clear—
 (1) That the five colonies mentioned have paid, in each of the past two years, to the Eastern Extension Cable Company (£59,920 and £53,363), sums in excess of the interest (£52,350) on the whole capital required to establish the Pacific cable, together with the purchase of an annuity to extinguish the subsidy obligations of these five colonies. Moreover, the liability for interest would not be confined to the five colonies referred to; the intention is that it shall be borne in equitable proportions by all, including New Zealand, Queensland, Fiji, and Canada, and in consequence would fall lightly on each. (2) That while at no time would the interest charge, distributed over nine Governments, exceed £52,350, so soon as the cable goes into operation the payments on interest account would gradually be reduced, and in a very few years would be wholly covered by surplus revenue. (3) That this Colony (Victoria) alone paid in the last two years in subsidy and guarantee the sums of £25,730 and £23,048, while the estimate shows that under a 2s. 6d. rate across the Pacific, the whole nine Governments would have £20,019 only to pay in the second year after the completion of the new line. Two years later no payment whatever would be required.

It is quite true that the guarantee now in force may cease any year by giving notice, and the obligation resting on five colonies to pay the annual subsidy of £32,400 will in any event terminate in 1899; but, without an alternative line under Government control, will not the Eastern Extension Company be in a position to make new demands and raise charges to the old high rates unless an extension of the subsidy be granted them?

CONCLUSION.

In connection with the estimates of revenue I have pointed out from statistical returns two elements of increase of business—(1) a normal increase under an exceedingly high tariff; (2) a very much greater increase under a lower tariff. There will be a third increase, which will be due to the development of traffic with Canada and in bringing the Australian Colonies into direct telegraphic touch with the whole telegraph system of North America. At present telegraphic intercourse is insignificant, but with a 2s. or 2s. 6d. rate across the Pacific, in place of a 6s. rate by a circuitous route, the circumstances will be favourable to the growth of telegraph business between the two continents, and, in consequence, the revenue to the Pacific cable from this source will rapidly develop to large proportions.

In the foregoing estimates of revenue I have reckoned only the normal increase under a high tariff, and taken no account of the greater increase which certainly will result from the charges being lowered, as proposed. I have likewise added nothing for the Australasia-North American business, the whole of which would flow to the Pacific cable. I am quite warranted, therefore, in expressing the opinion that the estimates of revenue I have presented are not exaggerated or unreasonable, and that the Pacific cable established by Government in the manner proposed would effect very important results. It would practically extinguish all subsidies now paid, and render guarantees unnecessary. It would permanently establish low rates for ocean telegraphy. It would yield a revenue which, after paying working expenses and providing for maintenance and renewals, would make good all interest charges on the whole cost of the undertaking from the beginning, and in a very few years would furnish large surplus earnings. I venture to think, then, that if the resolution passed by the Postal and Telegraph Conference in March last* be generally assented to in these colonies, the Governments need not hesitate in incurring the comparatively small, almost nominal, liability necessary to secure a telegraph connection across the Pacific, which every British subject will recognise to be of the greatest national and commercial value.

Having pointed out that there is a choice of routes for a British cable across the Pacific—that it can be established without difficulty in a way which would actually relieve this colony and other colonies from payments they are now under obligations

* *Resolution.*—"That, in the opinion of this Conference, the time has arrived when a second cable route should be established *via* the Pacific to Vancouver, touching at such places *en route* as may hereafter be agreed upon."

to make—I beg leave to refer, in a few words, to the antagonism which exists to a Pacific cable. The opposition to the undertaking takes its origin with the Eastern and Eastern Extension Telegraph Company. This powerful organisation enjoys a monopoly of telegraph business, at highly remunerative rates between this quarter of the globe and London; its great aim is to prevent the profitable monopoly being interfered with. What although there is a vital necessity for binding Australia, Canada, and Great Britain together?—the maintenance of profits is the primary consideration with this Company; the interests of the public are of little account; even the protection and integrity of the empire are entirely secondary. The Eastern and Eastern Extension Company has great influence in high quarters, and the evidence goes to show that its representatives and agents have left nothing undone, ever since the first inception of a Pacific cable, to cast doubt on its practicability, to undervalue its advantages, and to thwart every effort to promote its establishment. I deeply regret to be driven to the conclusion that at this very moment the hostile influence of this great organisation is employed in directions least expected, and that we must not be surprised if we find its agents and advocates continuing to exaggerate difficulties, even to create difficulties where none are known to exist. But it would trespass on your time much too long to enter into explanation on this point. I must content myself by giving a note of warning as to what we may still expect from the same quarter.

I had the honour, Mr. President, to transmit to you last year a paper on Imperial telegraphic communications. It was an address prepared for the Second Congress of Chambers of Commerce and Boards of Trade of the Empire, held in London in July, 1892. In that paper I referred to the extraordinary effect telegraphy had in the development of trade, and I directed attention to its application to the defence of trade and shipping, especially in the case of countries geographically situated as these colonies are. I pointed out that we could not have ocean telegraphy by too many routes, and that it would be the height of folly to rely in a critical moment on one route. In that paper I ventured to set forth the means which would in any national emergency give to Australian shipping on the high seas almost complete immunity from attack. I do not propose to trespass by repeating the arguments then employed. I ask your permission, however, to quote the last few words as a fit conclusion to the imperfect remarks which I have been privileged to make to-day.

“These considerations lead me to think it a matter of supreme importance to trade and shipping, to the expansion and support of British interests, that the telegraph should as speedily as

possible be extended across the Pacific Ocean. The day is not far distant when the Pacific will be traversed, as the Atlantic is, by many cables, but we must take one step at a time, and the first step which circumstances demand is undoubtedly that which will give Australia an alternative line of telegraphic connection with England. In my humble judgment this step is of vital importance to the Empire as a whole, and I appeal to every British merchant at home and abroad, I appeal to every Chamber of Commerce within Her Majesty's dominions, to urge upon their Governments that the establishment of this cable should not be long delayed."

There is no section of the globe's surface where a telegraph is more needed; nowhere within the influence of the Empire would it serve purposes more important. The spanning of the Pacific Ocean by the electric wire will be of immense advantage to British shipping; it will stimulate the development of new trade; it will strengthen the attachment of the great sister Dominions in both hemispheres to the motherland; it will effectively promote that Britannic union of trade and commerce so earnestly desired by all.



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